

PATENT ABSTRACTS OF JAPAN

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(21)Application number : 2001-307672

(71)Applicant : KITAMURA MASAHIRO

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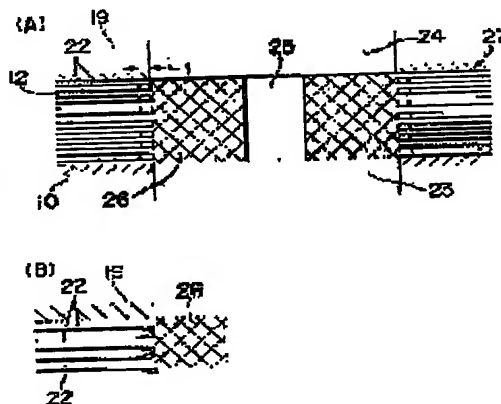
(72)Inventor : KITAMURA KATSUTOSHI

(54) ROTATION BRUSH AND ITS MANUFACTURING PROCESS

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a rotation brush in which elemental filaments neither break nor fall off, and to provide its simple manufacturing process.

SOLUTION: In this rotation brush, elemental filaments are radially protruded around the outer surface of a circular hub. The base of each elemental filament is reinforced with the row material of the circular hub. In the manufacturing process of this invention, the base of each elemental filament is reinforced by supplying the melt row material of the circular hub to the base of each elemental filament, which is radially protruded around the outer surface of the circular hub.



LEGAL STATUS

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PATENT ABSTRACTS OF JAPAN

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 (43)Date of publication of application : 28.03.2000

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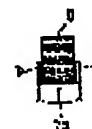
(21)Application number : 10-174976
 (22)Date of filing : 22.08.1998

(71)Applicant : TOMIYAMA HIDEO
 (72)Inventor : TOMIYAMA HIDEO

(54) TOOTHBRUSH AND ITS MANUFACTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To thoroughly remove the plaque and residual foreign matters stuck to teeth by extending many hair-like brush materials outward in the radial direction from the outer peripheral face of a circular section provided with a shaft hole at the center of a rotary brush, and protruding a spindle rotatably supporting the rotary brush on one end side of a shank member.
SOLUTION: A rotary brush 5 is provided with a circular section having a round shaft hole at the center, an outer peripheral section uniformly planted with many hair-like brush materials 8 on the circular section is formed into a nearly disk-like roll shape, and the rotary brush 5 is fitted to a shank member 1 to form a toothbrush. When the rotary brush 5 is to be fitted to the shank member 1, a spindle is inserted into the shaft hole of the rotary brush 5, the right and left extension pieces 2, 3 are opened outward, both ends of the spindle are inserted into coupling grooves, and the rotary brush 5 is rotatably held by the tip side 1b of the shank member 1. The hair tips of the hair-like brush materials enter between teeth, and the plaque and residual foreign matters stuck to teeth can be thoroughly removed.



LEGAL STATUS

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[Date of final disposal for application]

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[Date of registration]

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[Date of extinction of right]

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/00801

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl.⁷ A46B7/10, A46D1/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ A46B7/10, A46D1/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1926-1996 Toroku Jitsuyo Shinan Koho 1994-2003

Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E, X	JP 2003-111618 A (Masahiro KITAMURA), 15 April, 2003 (15.04.03), Full text; all drawings (Family: none)	1-17
A	JP 2000-83736 A (Hideo TOMIYAMA), 28 March, 2000 (28.03.00), Full text; all drawings (Family: none)	1-17

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
30 April, 2003 (30.04.03)Date of mailing of the international search report
20 May, 2003 (20.05.03)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

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